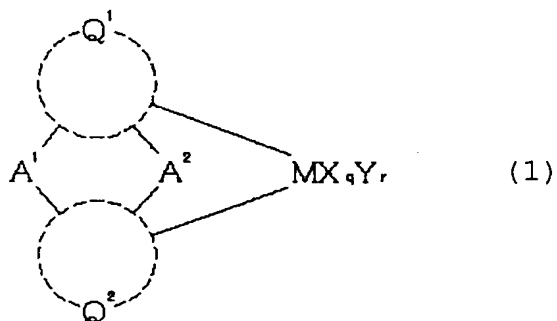


AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A transition metal compound represented by formula (1),



wherein M is a metal element of the groups 3 to 10 of the Periodic Table or a lanthanoid;

X represents a ligand having a sigma bond for binding to M, and when X is plural, the Xs may be the same or different;

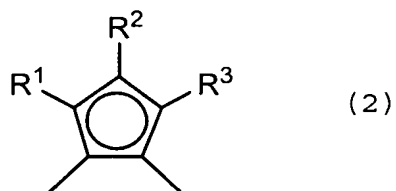
Y represents a Lewis base, and when Y is plural, the Ys may be the same or different;

A<sup>1</sup> and A<sup>2</sup> represent crosslinking groups and at least one thereof has a boron or phosphorous atom as a crosslinking atom, the crosslinking group having a boron atom as a crosslinking atom is represented by formula (4) and the crosslinking group having a phosphorous atom as a crosslinking atom is represented by formula (5);

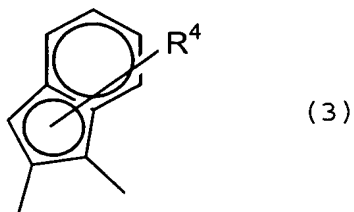
q is an integer of 1 to 5 and equals [(the valance of M) - 2];

r is an integer of 0 to 3; and

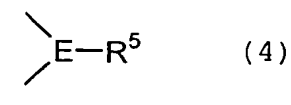
Q<sup>1</sup> and Q<sup>2</sup> have a structure represented by formula (2) or (3), and Q<sup>1</sup> and Q<sup>2</sup> may be different or the same,



wherein R<sup>1</sup> to R<sup>3</sup> are a hydrogen atom, a halogen atom, a hydrocarbon group with 1 to 20 carbon atoms, a halogen-containing hydrocarbon group with 1 to 4 carbon atoms, a silicon-containing group or a hetero-atom-containing group,

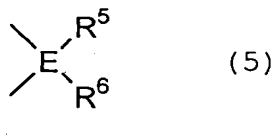


wherein R<sup>4</sup> is a hydrogen atom or a hydrocarbon group with 1 to 20 carbon atoms,



wherein E is a boron atom; and

R<sup>5</sup> is an electrically neutral basic group containing nitrogen, oxygen, phosphorous or sulfur, or a group having a negative charge containing N<sup>-</sup>,



wherein E is a phosphorous atom;

R<sup>5</sup> is a hydrocarbon group having 1 to 20 carbon atoms; and

R<sup>6</sup> is =N-R<sup>7</sup> (wherein R<sup>7</sup> is an alkyl group, alkenyl group, arylalkyl group or aryl group) or =S.

Claim 2 (Withdrawn): A catalyst for olefin polymerization comprising the transition metal compound (A) according to claim 1.

Claim 3 (Withdrawn): The catalyst for olefin polymerization according to claim 2, further comprising an activating co-catalyst (B), or an activating co-catalyst (B) and an organoaluminum compound (C).

Claim 4 (Withdrawn): The catalyst for olefin polymerization according to claim 3, wherein the activating co-catalyst (B) contains a compound which can react with the component (A) or a compound derived therefrom to form an ionic complex, a clay, a clay mineral, or an ion-exchange layered compound.

Claim 5 (Withdrawn): A method for producing an olefin polymer comprising homopolymerizing an olefin, or co-polymerizing an olefin with another olefin and/or another monomer in the presence of the catalyst for olefin polymerization according to claim 2.

Claim 6 (Withdrawn): An olefin polymer obtainable by the method according to claim 5.